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Claim 1

1. (Amended) A composition of matter, which comprises in admixture; N-acetylcysteine[;], N-acetyl-d-glucosamine and vitamin C whereby the amount of vitamin C is in an amount of at least 1000 mg. or greater to facilitate the absorption of N-acetylcysteine across the cellular membrane; and, a pharmaceutically acceptable carrier for oral administration.

CLAIM 2 (ORIGINAL)

2. The composition of claim 1 further comprising one more of the following substances from the group consisti of alpha-lipoic acid, sylmarin, quercitin, l-glutamine, probiotic, and dietary protein.

CLAIM 3 (ORIGINAL)

3. The composition of claim 1 further comprising alpha-lipoic acid, sylmarin, quercitin, l-glutamine, and a probiotic.

CLAIM 4 (ORIGINAL)

4. The composition of claim 3 further comprising dietary protein.

CLAIM 5 (ORIGINAL)

5. The composition of claim 1 further comprising flavorants.

Claim 6

(Amended) The [systematic] systemic administration of a pharmaceutically effective amount of the composition according to claim 1 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

CLAIM 7 (ORIGINAL)

7. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal suffering from hepatitis, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

CLAIM 8 (ORIGINAL)

8. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal suffering from HIV, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

CLAIM 9 (ORIGINAL)

9. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal suffering from allergies, to stimulate the natural production of glutathione in the biologically active cells of the mammal and to promote the shift of the T-cell balance from TH2 to TH1 and decrease levels of IgE.

CLAIM 10 (ORIGINAL)

10. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal to decrease serum cholesterol and triglycerides.

CLAIM 11 (ORIGINAL)

11. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal suffering from one or more of the following illnesses from the group consisting of chronic viral infections: HIV, hepatitis C, chronic fatigue, immuno deficiency syndrome, immune deficiencies, cancer, B-cell malignancies, including lymphomas, chronic leukemia, myeloma Waldenstrom's and MGUS to improve immune defense productions and thereby mitigate the progression of the illnesses to thereby limit fatigue.

CLAIM 12 (ORIGINAL)

12. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal to decrease fatigue.

CLIAM 13 (ORIGINAL)

13. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal to decrease the biologic effects of stress.

CLAIM 14 (ORIGINAL)

14. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal to increase energy and improve physical performance.

CLAIM 15 (ORIGINAL)

15. Administration according to claim 6 wherein a pharmaceutically effective amount is 0.1 mg/kg to about 50 mg/kg of body weight of the mammal, daily.

CLAIM 16 (ORIGINAL)

16. Administration according to claim 6 wherein a pharmaceutically effective amount is 0.5 mg/kg to about 25 mg/kg of body weight of the mammal, daily.

CLAIM 17 (ORIGINAL)

17. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

CLAIM 18 (ORIGINAL)

18. The systemic administration of a pharmaceutically effective amount of the composition according to claim 3 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

CLAIM 19 (ORIGINAL)

19. The systemic administration of a pharmaceutically effective amount of the composition according to claim 1 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal and reduce symptoms of diseases caused by excess unneutralized free radicals.

CLAIM 20 (ORIGINAL)

20. The systemic administration of a pharmaceutically effective amount of the composition according to claim 2 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal and reduce symptoms of diseases caused by excess unneutralized free radicals.

CLAIM 21 (ORIGINAL)

21. The systemic administration of a pharmaceutically effective amount of the composition according to claim 3 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal and reduce symptoms of diseases caused by excess unneutralized free radicals.

Claim 22

(Amended) The systemic administration [of a pharmaceutically effective amount of the composition] according to claim 19, wherein the disease is a member of the group consisting of pulmonary oxygen toxicity, adult respiratory distress syndrome, broncopulmonery dysplasia, sepis syndrome, Parkinson's disease, encephalitis, endotoxemia, anoxia induced neuronal damage, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial infarction, stroke, traumatic hemorrhage, spinal cord trauma, Crohn's disease, rheumatoid arthritis, diabetes, cataract formation, uvetis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cell apoptosis, radiation sickness.

Claim 23

(Amended) The systemic administration [of a pharmaceutically effective amount of the composition] according to claim 20, wherein the disease is a member of the group consisting of pulmonary oxygen toxicity, adult respiratory distress syndrome, broncopulmonery dysplasia, sepis syndrome, Parkinson's disease, encephalitis, endotoxemia, anoxia induced neuronal damage, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial infarction, stroke, traumatic hemorrhage, spinal cord trauma, Crohn's disease, rheumatoid arthritis, diabetes, cataract formation, uvetis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cell apoptosis, radiation sickness.

Claim 24

(Amended) The systemic administration [of a pharmaceutically effective amount of the composition] according to claim 21, wherein the disease is a member of the group consisting of pulmonary oxygen toxicity, adult respiratory distress syndrome, broncopulmonery dysplasia, sepis syndrome, Parkinson's disease, encephalitis, endotoxemia, anoxia induced neuronal damage, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial infarction, stroke, traumatic hemorrhage, spinal cord trauma, Crohn's disease, rheumatoid arthritis, diabetes, cataract formation, uvetis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cell apoptosis, radiation sickness.

CLAIM 25 (ORIGINAL)

The systemic administration of a pharmaceutically effective amount of the composition according to claim 1 to a mammal, to promote the natural production of glutathione in the biologically active cells of the mammal which accelerates the detoxification of ethanol and alleviates symptoms associated with excessive ethanol imbibation.

CLAIM 26 (ORIGINAL)

The composition of claim 1 further comprising a probiotic, said probiotic for promoting the breakdown and absorption of nutrients, the elimination of toxins and to inhibit the growth of harmful bacteria in the gastrointestinal tract, thereby facilitating the absorption of N-acetylcysteine into the gastrointestinal tract.

Claim 27

(Amended) The [probiotic] composition of claim [1]26, wherein said probiotic is a composition of "healthy bacteria" containing one or more of said healthy bacteria selected from the group comprising bifidobacterium longum, bifidobacterium infantis, lactobacillus acidophilus, lactobacillus casei, lactobacillus rhamnosus, saccharomyces boulardi, propionibacteria and enterococci.

CLAIM 28 (ORIGINAL)

The composition of claim **2** further comprising l-glutamine, said component being an essential dietary component to promote the support of gastrointestinal growth and function, thus facilitating the absorption of N-acetylcysteine through the gastrointestinal tract.

Claim 29 (Canceled)

Claim 30

(Amended) A composition which comprises in admixture, N-acetylcysteine, N-acetyl-d-glucosamine and vitamin C; and

a pharmaceutically acceptable carrier for oral administration.

Claim 31 (Canceled)

Claim 32

(Amended) The systemic administration of a pharmaceutically effective amount of the composition of claim 30 to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

Claim 33 (Canceled)

Claim 34

34. (New) A method of promoting the biosynthesis of mucosal glycoproteins and/or facilitating the absorption of N-acetylcysteine into a gastrointestinal tract of a mammal, comprising the step of administering the composition of claim 1.